

California Needs a Biofuels Plan

March 2006

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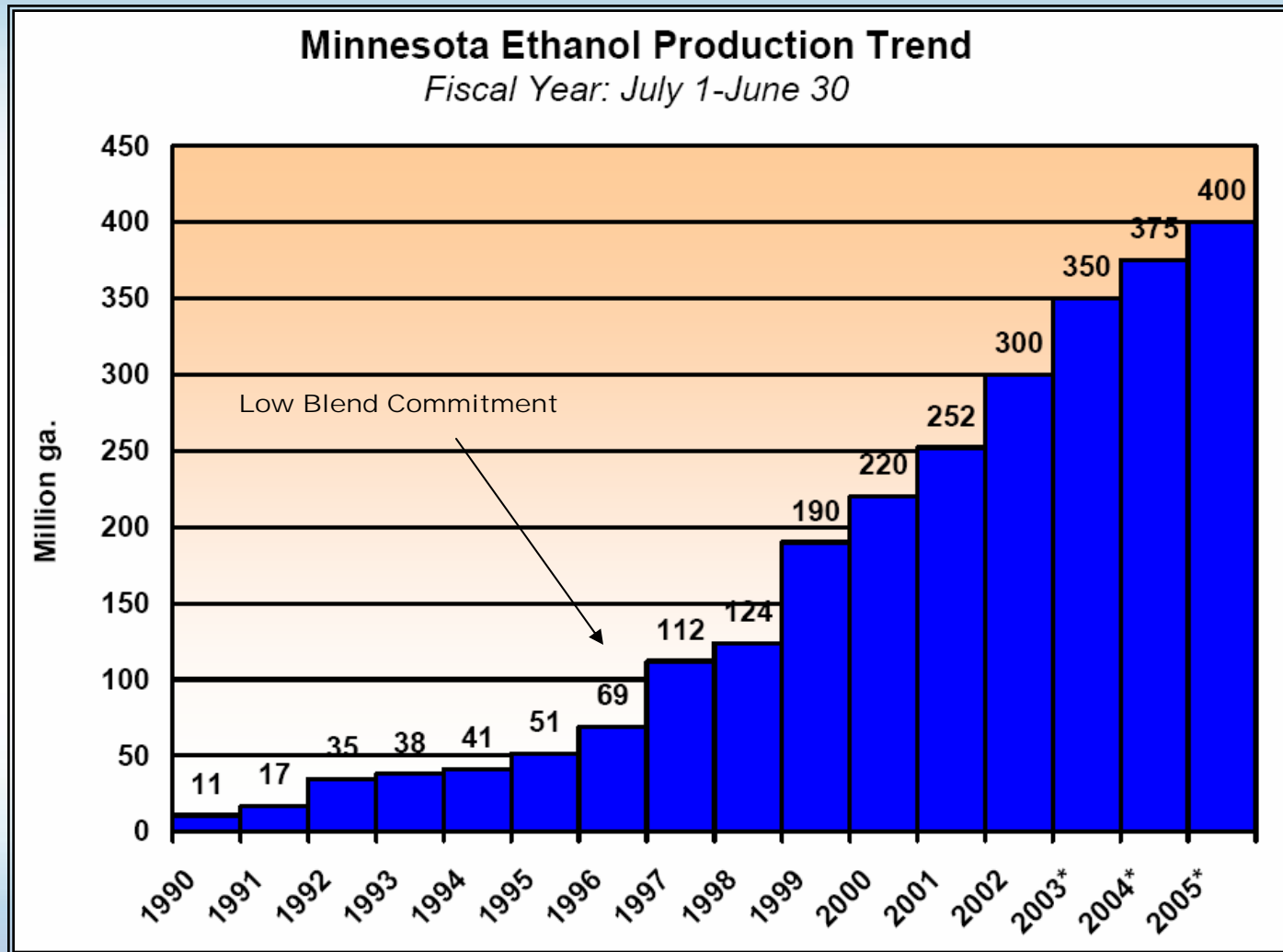
Current CA Environment Not Productive

- 3+ Years of Ethanol Use as Replacement for MTBE; little in-state production
- Ongoing Regulatory Uncertainty Chilling Industry Growth
- Contrast: Minnesota nearly tripled in-state production in 3+ years once they made a volumetric commitment to biofuels

The Minnesota Plan

- Required statewide blending via state oxygen requirement (1997) & implemented “producer payment” program in 1980s
- Today, for every \$1 paid for ethanol producer payments, the state earns \$16-20 in *general fund dollars*

The Minnesota Plan



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Minnesota Lessons E-85

- E-85 enjoys widespread support in California
- How best to promote it?
- Best Solution Incorporates All Available Strategies
- Additional Proposal:

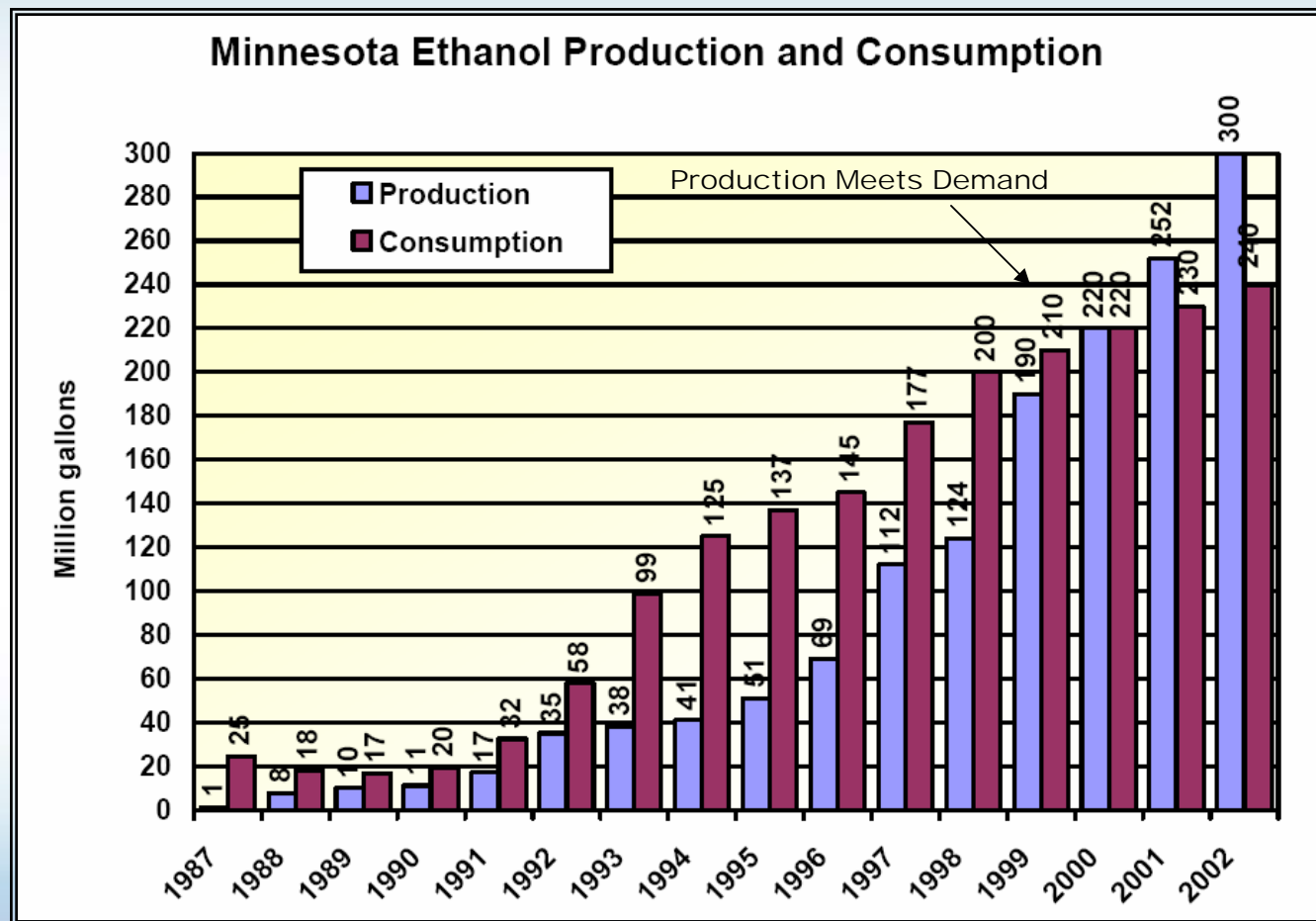
"The Overflow Strategy"

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“Overflow Strategy” for E85

- *Overflow Strategy*: commit to low blends; let low blend market overflow into high blend market
- Advantages:
 - E-85 Burden on Healthy California Biofuels Industry
 - Less Burden on the State
 - Optimizes Cellulosic R&D Dollars for California

"Overflow Strategy" At Work

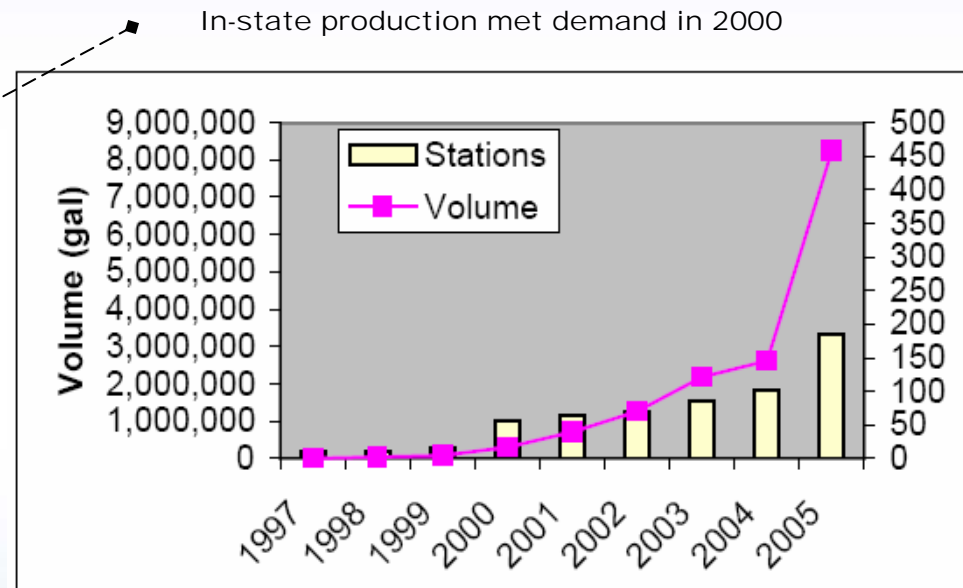


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Minnesota E85

- When in-state ethanol production meets the demand for low blends ... overflow into high blends?

Year	# Stations Year-End	Total Yearly Volume	Monthly Station Avg Vol
1997	11	5,933	225
1998	12	37,521	288
1999	17	74,959	583
2000	56	301,152	780
2001	65	706,228	965
2002	70	1,262,318	1,479
2003	85	2,185,905	2,335
2004	101	2,611,218	2,270
2005	184	8,240,992	4,660



Minnesota Just Opened Its 200th E-85 Station

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Proposed RFS A Good Solution

- Flexible Compliance (E6, E10, E85, B2-B20, Renewable Diesel, e-Diesel)
- Lets Predictive Model do its job
- 2 billion gallons by 2020 *too conservative*; we have 1 billion gallons already; E10 would create 1.5 billion gallons.

REAP Ethanol Report

- Recently Completed Ethanol Analysis
- Many states switched from MTBE to ethanol blends in recent years; we looked at air quality monitoring data
- AQ Modeling useful, but not the only source of data with regard to ethanol

CA Ozone Trends

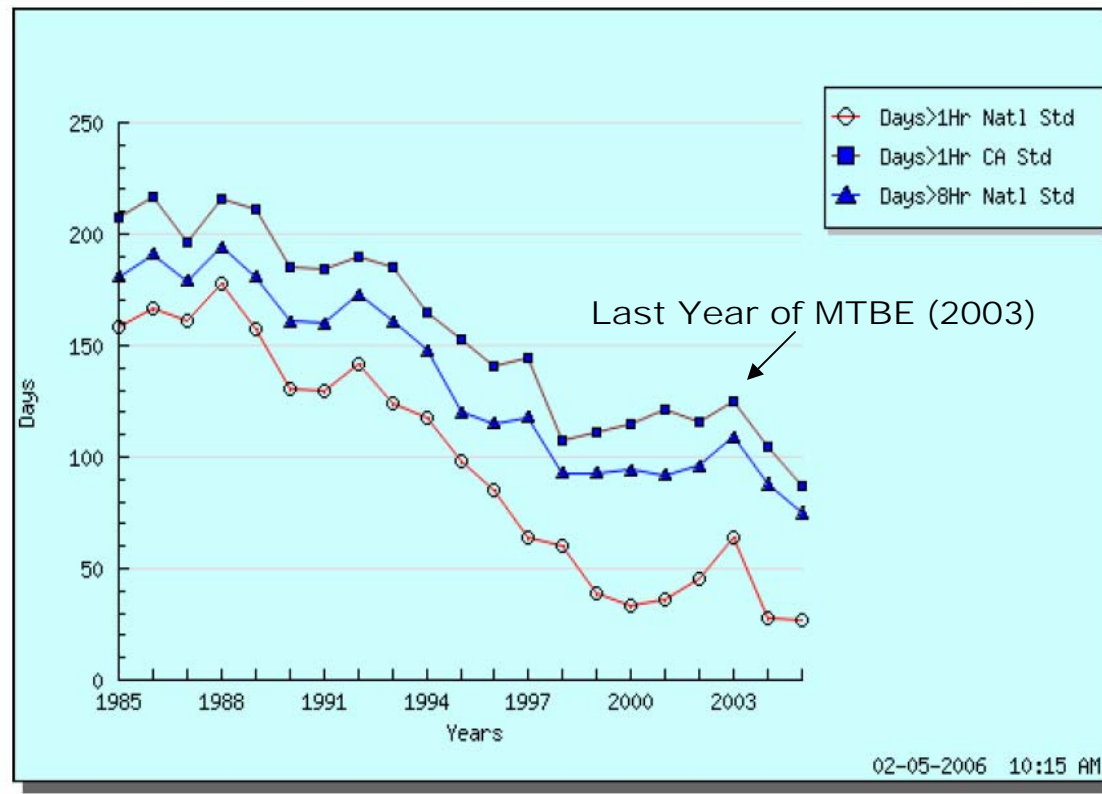


Air Resources Board

iADAM

Ozone Trends Summary: **South Coast Air Basin**
8-Hour Ozone Planning Area

FAQs



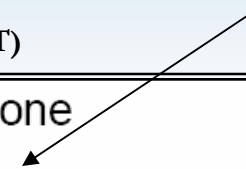
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CT & NY Ozone Trends

Annual Summary Information for Ozone (CT)

Annual Summary Information for Ozone								
	1998	1999	2000	2001	2002	2003	2004	2005
8-hour Ozone Exceedance Days	25	33	15	26	36	14	6	20
1-hour Ozone Exceedance Days	5	11	3	9	13	6	1	7

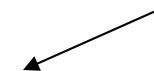
Switch to E10



Annual Summary Information for Ozone (NY)

	1998	1999	2000	2001	2002	2003	2004	2005
8-hour Ozone Exceedance Days	14	20	7	17	28	15	1	10

Switch to E10



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Immediate Actions

High Priority

- Capture Existing Ethanol Market (1 billion gal.)
- Capture Low Blend Biodiesel Market
 - No Significant AQ Concerns
 - Low Sulfur Lubricity Solution
- *Use these two markets to Catalyze Overflow?*
- Instruct ARB to optimize fuels regulations for non-petroleum fuel blending